

Strand Area(s): Science, English

**Year level: 3 & 4****Duration of unit: 8 weeks**

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**The Big Idea:** We depend on plants for a variety of reasons; and need an understanding of them.**Understandings**

Explain the role of roots, stems, leaves, flowers and fruits.  
 Explain the relationships between the stages and processes in the plant life cycle.  
 Show awareness of the need for fair testing.  
 Make predictions, measurements and observations.  
 Display results in simple tables and graphs or as scientific diagrams.  
 Identify and summarise patterns in results.

**Focus Questions**

What is a plant?  
 What is a plant's life cycle? What happens?  
 How does a plant grow?

| Domain  | Standards                   | Learning Focus   |
|---------|-----------------------------|--|
| Science | Knowledge and Understanding | Students identify and describe the structural features of living things, including plants and animals. They identify how these features operate together to form systems which support living things to survive in their environments.   |
|         | Science at Work             | At Level 3, students plan, design, conduct and report collaboratively on experiments related to their questions about living and non-living things and events. They select and use simple measuring equipment, use a range of appropriate methods to record observations, and comment on trends. They describe the concept of a fair test and identify the variables associated with an experiment. They develop fair tests to make comparisons and explain how they have controlled experimental variables. |

| Research Skills   | Communication Skills   | Thinking Skills   | Cooperative Skills  |
|---|--|---|---|
| <ul style="list-style-type: none"> <li>➤ List</li> <li>➤ Classify</li> <li>➤ Compare and contrast</li> <li>➤ Locate information</li> <li>➤ Listen and observe</li> <li>➤ Summarise</li> </ul> | <ul style="list-style-type: none"> <li>➤ Explain</li> <li>➤ Elaborate</li> <li>➤ Justify</li> <li>➤ Persuade</li> <li>➤ Respond</li> <li>➤ Visually represent</li> <li>➤ Role play</li> <li>➤ Question</li> <li>➤ Share ideas</li> </ul> | <ul style="list-style-type: none"> <li>➤ Analyse</li> <li>➤ Consider</li> <li>➤ Infer</li> <li>➤ Hypothesize</li> <li>➤ Predict</li> <li>➤ Recognise bias</li> <li>➤ Self assessment</li> <li>➤ Reflect</li> <li>➤ Thinkers keys</li> <li>➤ Question matrix</li> <li>➤ De Bono's hats</li> <li>➤ Lotus Diagram</li> </ul> | <ul style="list-style-type: none"> <li>➤ Follow directions</li> <li>➤ Share</li> <li>➤ Work independently</li> <li>➤ Paired work</li> <li>➤ Group work</li> <li>➤ Discussions</li> <li>➤ Work to a timeline</li> <li>➤ Help others</li> <li>➤ Respect opinions</li> </ul> |

| Key Resources   |  |
|---|--|
| <p>What materials are available to us?<br/>(books, CD ROM, videos, charts etc)</p> <p>Do we need to do any reading about this topic?</p> <p>Do we know any experts in the area?</p> | <p><b><u>Texts</u></b><br/>Guided reading texts: <i>selected texts in reading room</i><br/><b>Non Fiction Texts:</b> Big Books</p> <p><b><u>Videos / DVDs</u></b><br/><i>Private Life of Plants</i> videos</p> <p><b><u>CD ROMS</u></b></p> <p><b><u>Websites</u></b><br/>see IWB links on wiki<br/>updates will be loaded onto blog</p> |

|   |  |
|---|--|
| <p><b>Tuning In</b><br/>How can we engage children in this topic?</p> <p>What media can we use?</p> <p><b>Assessment</b><br/>How can we assess student's prior knowledge?</p> <p><b>Extension</b></p> | <p>Tasks</p> <ul style="list-style-type: none"> <li>• Word Wall</li> <li>• 'mystery box' (see lesson 1 in unit plan)</li> <li>• beginning <i>Personal Science Journal</i></li> <li>• start <i>Garden Buddies</i> home program</li> <li>• TWLH chart</li> </ul> |
|---|--|

| Shared Experiences   |   |
|--|---|
| <p>What excursions are available?</p> <p>Do we know any experts in the area?</p> | <p><b><u>Incursion</u></b></p> <p><b><u>Excursion</u></b><br/>* camp</p> <p><b><u>Guest Speaker (s)</u></b><br/>➡</p> |

| Assessment   |  |
|--|--|
| <b>Student</b> <ul style="list-style-type: none"> <li>Peer/group/self/teacher/assessment of knowledge, skills understandings (checklists, observations, oral and recorded work, etc)</li> <li>Self Assessment – weekly reflection, end of semester assessment</li> </ul> | <b>Tasks</b><br>Portfolio pieces (see unit plan) |
| <b>Portfolio Pieces</b> <ol style="list-style-type: none"> <li>Life Cycle of a Plant (pre-test) in Science journal</li> <li>Labelled diagram</li> <li>Others to be added during term</li> </ol>  |  |

|  |  |
|--|--|
| <b>Making Conclusions</b><br>~ How can we assist children to pull it all together?<br>~ What curriculum processes will help here?<br>~ How can we see if they are making connections?                                | ➔  |
| <b>Related Experience</b><br>~ How can we further children's understandings and experiences about this topic?<br><br><b>Reflection and Action</b><br>~ How can we empower children to act on what they have learned? |  |
| <b>Planning for Student Assessment</b><br>Strategies for assessment of skills, knowledge and understandings  | <b>Notes</b><br>➔ Statements of understandings – listed the understandings for this unit and children record examples to demonstrate they have achieved the understandings |

| ICT                       |   |
|---------------------------|---|
| Computers / Computer Lab  | ICT   |
| Kidspiration<br>blog/wiki | blog, wiki, podcasts<br><br>updating own page on students wiki<br>beginning to use email and forum<br><br>IWB links on teacher's wiki |

| Plants in Action  |  |
|---|--|
| Week  | Activities   |
| <b>Week 1</b><br><b>6 Oct</b><br><br><b>Tuning in</b>                     | ➔ <b>What goes where?</b><br><u>Session 1</u> : Discuss a 'mystery box' of plant items; arrange pictures to represent a plant life cycle; plant word wall; TWLH chart; science journal<br><br><u>Session 2</u> : Garden Buddies home program   |
| <b>Week 2</b><br><b>13 Oct</b><br><br><b>Immersion</b>                    | ➔ <b>What's inside a seed?</b><br><u>Lesson 2</u> : Discuss seeds; work in teams to record observations of a dry and then a soaked bean seed; label a diagram of the inside of a bean  |
| <b>Week 3</b><br><b>20 Oct</b><br><b>Life Ed</b><br><br><b>Immersion</b>  | ➔ <b>Bean seed germination</b><br><u>Lesson 3</u> : Explore bean seeds; read and discuss a procedural text for a bean germination; work in teams to prepare bean seeds; make ongoing observations and recordings of bean seed germination  |
| <b>Week 4</b><br><b>27 Oct</b><br><br><b>Immersion</b>                    | ➔ <b>Flowers and pollination</b><br><u>Lesson 4</u> : Explore the parts of a flower; draw and label a diagram of a flower; read a factual text about the parts of a flower and pollination<br><i>Pollination Process</i> interactive (on Science Background CD)  |
| <b>Week 5</b><br><b>3 Nov</b><br><b>Swimming</b><br><br><b>Immersion</b>  | ➔ <b>Flowers, fruits and seeds</b><br><u>Lesson 5</u> : observe and draw fruits and the seeds inside them; read about the way fruits develop from fertilised flowers   |
| <b>Week 6</b><br><b>10 Nov</b><br><b>Swimming</b><br><br><b>Immersion</b> | ➔ <b>Patterns in plants</b><br><u>Lesson 6</u> : create timelines and representations of bean seed germination and the growth of a seedling; review understanding of 'living' and 'not living'   |
| <b>Week 7</b><br><b>17 Nov</b><br><br><b>Making connections</b>           | ➔ <b>Investigating conditions for plant growth</b><br><u>Lesson 7</u> : discuss conditions that affect plant growth; learn how to write questions for investigation; work in teams to plan and set up an investigation of the conditions that affect plant growth; observe and record the results of their investigations  |
| <b>Week 8</b><br><b>24 Nov</b><br><br><b>Making connections</b>           | ➔ <b>Plant life cycle</b><br><u>Lesson 8</u> : arrange and annotate pictures to represent the plant life cycle; review unit by using science journal, word wall, TWLH chart and other resources; reflect on learning during the unit<br><i>Plant Scan</i> interactive Learning Object L31 on DigiLearn<br><i>The Life Cycle of Flowering Plants</i> interactive crossword on Primary Connections website |
| <b>Week 9</b><br><b>1 Dec</b><br><br><b>Bringing it all together</b>      | ➔ Finishing up unit, post-testing and evaluating; testing for reporting  |
| <b>Week 10</b><br><b>8 Dec</b><br><br><b>Conclusion</b>                   | ➔ Christmas/CAMP   |
| <b>Week 11</b><br><b>15 Dec</b>   | ➔ Christmas  |